Nevada State Health Division

"A Healthy Tomorrow Begins Today"

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Health Division

The Nevada State Health Division promotes and protects the health of all Nevadans and visitors to the state through its leadership in public health and enforcement of laws and regulations pertaining to public health. In fulfilling its mission, the Nevada State Health Division is guided by the State Board of Health and administers seven bureaus:

- Administration
- Office of State Health Officer
- Bureau of Alcohol and Drug Abuse
- Bureau of Community Health
- Bureau of Early Intervention Services
- Bureau of Family Health Services
- Bureau of Health Planning and Statistics
- Bureau of Health Protection Services
- Bureau of Licensure and Certification

Updated 09.09.05

Hot Topics

- 2005 HHS Poverty Guidelines
- 2004 Report on Sepsis in Nevada
- NEW AIDS/HIV NV Epidemiological Profile (2004)
- Chronic Disease Presentation
- Flu
- Health Alert Network
- Health Division Budget Presentation
- Leukemia Clusters
- New Cancer Report
- Nevada Diabetes Report 2005
- Nursing Home Compare
- NEW Nevada Personal Health Choices 2000-2004
- Prostate Cancer Profile
- West Nile Virus

Frequent Visits

- Birth and Death Records

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- Office of Epidemiology
- Public Health Preparedness

Overview of Programs

Special Note:

The Adobe Acrobat Reader is required to view several documents contained on this website. The Adobe Acrobat Access Plug-in 6.0 enables blind and vision impaired users to read .PDF documents in Acrobat 6.0 or Acrobat Reader 6.0. To obtain a free copy of this product can be downloaded **here.**

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Nevada State Health Division

"A Healthy Tomorrow Begins Today"

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West Nile Virus

Nevada Health Division Contacts
Epidemiology Office (775) 684.5911 or
toll-free: 888.608.4623
Vicky Fogelman, DVM, MPH
Public Health Veterinarian

CDC West Nile Virus Info Lines
English: 1-888-246-2675
Spanish: 1-888-246-2857
Hearing Impaired TDD: 1-866-874-2646

West Nile virus is an emerging mosquito-borne virus that was newly introduced to the United State in 1999, where it resulted in the death of many birds and caused illness in both humans and horses. West Nile virus has spread across the United States since its initial recognition in New York state, and now occurs throughout most of the United States. The most serious manifestation of West Nile virus infection is fatal encephalitis (inflammation of the brain), in humans, horses, and certain domestic and wild birds. As of March 2004, West Nile virus has been documented in 48 states and the District of Columbia.

General Information | Statistics & Surveillance | Information For Clinicans
Information for Veterinarians | Other Helpful Websites

General Information

- **West Nile Virus--What Nevadans Need to Know - *Brochure***
- **Virus del Nilo Occidental: Lo que los Nevadences necesitan saber! - *Spanish Brochure***

- West Nile virus and other mosquito-borne viruses in Nevada: FAQs
- CDC Fight the Bite educational website
- Information and Images for Bird Identification
- Bird Specimen Submission Guidelines

Statistics and Surveillance

- Summary of Human WNV Cases, by County, for 2004 - Nevada
  - Map - Human WNV case counts by county, Nevada 2004
  - Map - Human WNV case count by state, 2004
- Summary of Animal Test Results, Nevada 2004

Maps of Test Results

- USGS Map - National WNV maps - Bird, Human, Sentinel, Mosquito

Mosquito Control Information

- Information on Mosquito Control for Individuals
- Information about Community Adult and Larval Mosquito Control Measures

Information for Clinicians

- West Nile Fact Sheet for Clinicians
- West Nile Virus Clinical Guidance

- **West Nile Primer for Clinicians**
- **West Nile Virus Guidelines for submission to PH Lab**

Information for Veterinarians

- **West Nile Virus in Animals**
  - **West Nile Virus in Dogs and Cats**
  - **West Nile Virus in Birds**
  - **West Nile Vertebrate Ecology**
  - **West Nile Virus in Horses**
  - **West Nile Virus in Game Animals**
  - **West Nile Virus in Wildlife**
- **Map of Animal cases US, 2003**
- **West Nile Testing/Sample Submission guidelines**
- **West Nile Vaccination of Equines**

Other helpful websites

- **Nevada Department of Agriculture**
- **National Pesticide Information Center - Oregon State University**
- **National Wildlife Health Center West Nile Project**

- **U.S. Department of Agriculture West Nile Information**
- **CDC West Nile Virus**
- **American Mosquito Control Association**
- **Clark County Health District**
- **Washoe District Health Department (Vector Borne Diseases Program)**
- **California West Nile Homepage**

Updated 03.18.05

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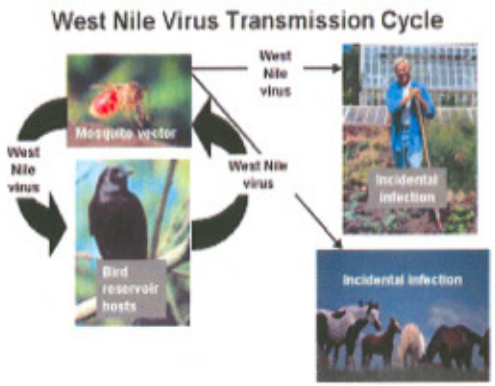
What is West Nile Virus (WNV)? It is a flavivirus commonly found in Africa, West Asia, and the Middle East. It is not known where the U.S. virus originated, but it is most closely related genetically to strains found in the Middle East. The virus can infect humans, birds, mosquitoes, horses and some other mammals. WNV may cause West Nile fever—generally a mild disease in people—characterized by flu-like symptoms. More severe disease from WNV infection can result in encephalitis, meningitis, or other problems, such as sudden paralysis. Encephalitis refers to an inflammation of the brain, and meningitis is an inflammation of the membrane around the brain and the spinal cord. About 80% of people who become infected with WNV will not have any symptoms at all.

Is West Nile Virus contagious? The virus is spread by mosquitoes, not human contact. However, WNV transmission has occurred in a very small number of cases via blood transfusions, organ transplants, breastfeeding and pregnancy. The human blood supply in this country and organs used for donation are currently screened for West Nile Virus prior to use. Because the health benefits of breast-feeding are well established, and the risk for WNV transmission through breast-feeding is still being evaluated, the Centers for Disease Control and Prevention (CDC) do not suggest a change in breast-feeding recommendations—women who are ill may wish to consult their physician.

How many human cases have been reported in the United States and Nevada? CDC reported 2,470 human cases of West Nile Virus in 2004, including 88 deaths. You may access this information via the web at: http://www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm

There were 48 cases of West Nile Virus reported in Nevada in 2004. More information is available at: http://health2k.state.nv.us/special/wnv/index.htm

How do people get infected with West Nile Virus? People become infected by the bite of a mosquito infected with West Nile Virus. Mosquitoes become infected when they feed on birds with virus in their blood. The virus is transmitted to a new host via the mosquito's saliva when it bites another animal or person. Humans and horses are incidental or "dead-end" hosts which cannot infect other mosquitoes. Person-to-person transmission does not occur.



Who is at risk for getting West Nile Virus Infection? All residents of areas where WNV activity has been identified are at risk of getting West Nile infection. Persons over 50 years of age have the highest risk of severe disease. Immuno-compromised persons may be at higher risk for the severe types of WNV-related disease. People who spend a lot of time outdoors are also at higher risk for infection with WNV, since they have more chance of being bitten by an infected mosquito. The risk of getting WNV infection through blood transfusions or organ donations is very small and should not prevent people who need surgery from having it. The risk of transmission during breast feeding or pregnancy is also considered to be very small.

West Nile Virus

What Nevadans Need to Know

NEVADA STATE HEALTH DIVISION
Office of Public Information

Please visit our Website:
Health2k.state.nv.us
1-(888) 608-4623

Prepared in partnership with:
Nevada Dept. of Agriculture, (775) 688-1182
Nevada State Veterinarian
Clark County Health District, (702) 385-1291
Washoe County District Health Dept., (775) 328-2434

What are some of the symptoms? Most people infected with WNV do not become ill. For those who do become ill, the time between the mosquito bite and onset of symptoms is generally from 3 to 14 days. About 1 in 5 infected people will develop symptoms, typically headaches and flu-like illness. This can include symptoms such as fever, fatigue, muscle weakness, nausea, vomiting and sometimes swollen lymph glands or a skin rash. Only about 1 in 150 infected people will develop serious complications. Symptoms may appear suddenly with the onset of severe headache, high fever, stiff neck, and extreme muscle weakness. Sudden paralysis can also occur rarely.

What percentage of people die with severe illness due to West Nile Virus? Among those with severe illness due to WNV virus, case-fatality rates range from 3% to 15%. It is important to remember that fewer than 1 in 100 of those infected with WNV will develop severe illness.

Is there a vaccine against West Nile Virus? There is currently no vaccine available for humans, but several companies are working towards developing such a vaccine.

I think I have symptoms of West Nile Virus—What should I do? Immediately contact your health care provider if you have concerns about your health. If you or your family members develop symptoms such as high fever, confusion, muscle weakness, and severe headaches, you should see your doctor immediately. He/she will complete a medical history to assess your risk for WNV and may also order blood samples for laboratory confirmation.

How is West Nile virus-related disease treated? There is no specific treatment for West Nile Virus-related diseases. In severe cases, intensive supportive therapy is indicated, often involving hospitalization.

Which Animals Become Infected? An infected mosquito can bite any animal, but not all animals will become ill. As the reservoir host for this virus, birds are most often infected, but certain other animals can become infected and ill as well.

Birds. WNV is new to this country and does cause illness and death in certain native bird species that have no natural resistance to the infection. The highest death rates are seen among birds in the **corvid** family, which includes crows, ravens, jays and magpies. Raptors such as hawks and owls are also highly susceptible to the virus. Dead birds in an area may mean that West Nile Virus is circulating between the birds and the mosquitoes in your area. The public can play an important role in monitoring West Nile Virus by reporting dead birds to the Nevada State Veterinarian, (775) 688-1182, Ext. 232.

Horses. Horses are susceptible to WNV infection and to other viruses which may cause similar symptoms, such as Western Equine Encephalitis. These diseases may cause signs such as lack of coordination or muscle control, weakness of limbs, inability to rise, and death. WNV vaccines are available for horses through local veterinarians. Nevada reported 131 positive horses in 2004. Thirty-eight percent of these horses died or were euthanized.

Animal Surveillance. Throughout the year, public health scientists test large concentrations of female mosquitoes (only females transmit West Nile Virus). Vector-Borne Disease specialists in conjunction with the Nevada State Dept of Agriculture and the U.S. Dept. of Agriculture Wildlife Services, also collect samples from sentinel chicken flocks, waterfowl, wildlife and horses. Officials also analyze samples from dead birds. Veterinarians are encouraged to submit specimens for testing in suspect equine WNV cases.

Human Surveillance. Cases of WNV in humans are reportable by physicians to the local and State Health Department.

What are public health officials doing to combat West Nile Virus? District and county public health officials are continuing an aggressive mosquito abatement program in Nevada. This program includes applications of larvicides designed to kill mosquitoes in the early stages of growth. Experts target wetland areas, storm drain catch basins and other areas known to house large populations of mosquitoes. They also treat abandoned swimming pools or other standing water areas with larvicides.

Precautions to Avoid Mosquito Exposure

***From April -October, minimize time spent outdoors at dawn, dusk, and early evening, when mosquitoes are most active. Avoid shaded areas where mosquitoes may be resting.**

***Wear protective clothing, such as long-sleeved shirts and lightweight long pants when outdoors.**

***Apply insect repellent sparingly to exposed skin and clothing, according to manufacturer's directions.**

*** Make certain the product contains DEET (N,N-diethyl-meta-toluamide), as it is the most effective and best-studied insect repellent available. Only products containing DEET offer long-lasting protection after a single application. DEET products are very safe when used according to the directions.**

*** Repellent may irritate the eyes and mouth, so avoid applying it to the hands of children.**

*** Do not apply repellents containing permethrin, which is meant for clothing, directly on exposed skin. If you use permethrin, there is no need to spray repellent containing DEET on the skin under your clothing.**

*** Make sure doors and windows have tight-fitting screens; repair screens with tears or holes.**

*** Remove water-holding containers from your property, such as discarded tires, tin cans, ceramic pots and plastic containers; ensure roof gutters drain properly & remove standing water.**

*** Change water in bird baths at least once per week.**

*** Eliminate seepage and standing water from cisterns, cesspools, septic tanks and animal watering tanks.**

*** Drain water from pool covers and keep pools and hot tubs cleaned and chlorinated.**

*** Stock permanent ponds or fountains with mosquito eating fish.**

Should insect repellant products containing DEET be used on children? The American Academy of Pediatrics has stated that products with a 10% or less concentration of DEET are acceptable for children over two months of age. It is recommended that for children under two years of age, only one application per day of repellent containing DEET should be used. The Nevada State Health Division strongly advises you to consult your pediatrician or health care provider if you have questions about using repellent on children. This will enable you to make an informed decision regarding the risks and benefits

3-2005/NSHD Public Information Office/J. Flamm/(775) 684-4221